Online-Only Abstract

Enterococcal bacteraemia: factors influencing mortality, length of stay and costs of hospitalization

A. L. Y. Cheah[1,2,3], T. Spelman[4,5], D. Liew[6], T. Peel[7], B. P. Howden[3,8,9], D. Spelman[2,10,11], M. L. Grayson[3,12], R. L. Nation[1] and D. C. M. Kong[1]

1) *Centre for Medicine Use and Safety, Monash University, Parkville,* 2) *Department of Infectious Diseases, The Alfred, Melbourne,* 3) *Infectious Diseases Department, Austin Health, Heidelberg,* 4) *Centre for Population Health, Burnet Institute, Prahran,* 5) *School of Public Health and Preventive Medicine, Monash University, Melbourne,* 6) *Melbourne EpiCentre, The Royal Melbourne Hospital, Parkville,* 7) *Department of Surgery, St Vincent's Health, University of Melbourne, Melbourne,* 8) *Microbiology Department, Austin Health, Heidelberg,* 9) *Department of Microbiology and Immunology, University of Melbourne, Melbourne,* 10) *Microbiology Unit, The Alfred, Melbourne,* 11) *Department of Infectious Diseases and Microbiology, Monash University, Melbourne and* 12) *Department of Medicine, University of Melbourne, Melbourne, Victoria, Australia*

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Abstract

Enterococci are a major cause of nosocomial bacteraemia. The impacts of *vanB* vancomycin resistance and antibiotic therapy on outcomes in enterococcal bacteraemia are unclear. Factors that affect length of stay (LOS) and costs of managing patients with enterococcal bacteraemia are also unknown. This study aimed to identify factors associated with mortality, LOS and hospitalization costs in patients with enterococcal bacteraemia and the impact of vancomycin resistance and antibiotic therapy on these outcomes. Data from 116 patients with vancomycin-resistant *Enterococci* (VRE), matched 1:1 with patients with vancomycin-susceptible *Enterococcus* (VSE), from two Australian hospitals were reviewed for clinical and economic outcomes. Univariable and multivariable logistic and quantile regression analyses identified factors associated with mortality, LOS and costs. Intensive care unit admission (OR, 8.57; 95% CI, 3.99–18.38), a higher burden of co-morbidities (OR, 4.55; 95% CI, 1.83–11.33) and longer time to appropriate antibiotics (OR, 1.02; 95% CI, 1.01–1.03) were significantly associated with mortality in enterococcal bacteraemia. *VanB* vancomycin resistance increased LOS (4.89 days; 95% CI, 0.56–11.52) and hospitalization costs (AU$ 28 872; 95% CI, 734–70 667), after adjustment for confounders. Notably, linezolid definitive therapy was associated with lower mortality (OR, 0.13; 95% CI, 0.03–0.58) in *vanB* VRE bacteraemia patients. In patients with VSE bacteraemia, time to appropriate antibiotics independently influenced mortality, LOS and hospitalization costs, and underlying co-morbidities were associated with mortality. The study findings highlight the importance of preventing VRE bacteraemia and the significance of time to appropriate antibiotics in the management of enterococcal bacteraemia.